analysis of family budgets, are inadequate and sometimes of doubtful accuracy; and his conclusions are advanced as approximations to, and not as accurate descriptions of, the truth. He believes, however, that the picture is the most accurate which can, at present, be drawn and that it could serve as a provisional hypothesis, subject to revision as further information accumulates.

Of the six groups into which the population of the country is divided, the first and poorest contains 4,500,000 people, the income per head being 10s., and the estimated average expenditure on food, 4s. Groups 2-5 inclusive contain 9,000,000 people each; the income per head per week ranges from 10s. to 45s. and the estimated average expenditure on food is from 6s. to 12s. Group 6, containing 4,500,000 persons, has an income per head per week of over 45s., of which 14s. is spent on food.

As the income grows smaller, so is a larger proportion spent on food, which is a prime necessity of life. The average expenditure under this head, in fact, represents a proportion rising from below 20 per cent. in Group 6 (the richest) to nearly 50 per cent. in Groups 1, 2 and 3. Among the very poor, as much as 70 per cent. of the total income has, at certain times, been spent on food.

The diets on which the different groups subsist are analysed in terms of their market ingredients and in terms of their chemical constituents (proteins, fats, carbohydrates and minerals); the conclusion is reached that, assuming the validity of the standards, the average diet of Group I is inadequate for perfect health in all essential constituents; Group 2 is adequate only in total proteins and total fat; Group 3 is adequate in energy value, proteins and fat, but below standard in minerals and vitamins; Group 4 is adequate in iron, phosphorus and vitamins, but probably below standard in calcium; Group 5 has an ample margin of energy in everything, with the possible exception of calcium, and in Group 6 the standard requirements are exceeded in every case. The standard, it should be recognized, is the physiological or ideal standard for health; that is to say, one

which will produce a state of well-being such that no improvement can be effected by a change in diet. The general conclusion of the book, compressed in a single sentence, is that a diet completely sufficient for health according to modern standards is reached only at an income level above that of 50 per cent. of the population; and that faulty diet is responsible for a good deal of ill health, the incidence and degree of which would be greater at the lower income levels.

In considering the rate of growth in children in relation to their nutrition, the author shows himself fully cognizant of the importance of heredity. Here are his words: "It is well known that stature is largely determined by heredity. The extent to which a child will attain the limit set by heredity is, however, affected by diet. Certain deficiencies of the diet lead to a diminution in the rate of growth, with the result that the adult does not attain the full stature made possible by his inherited capacity for growth."

In short, we must improve the feeding dietary of the mass of people in this country before their physical differences can be interpreted as having a purely genetic significance.

Speakers on eugenics should acquaint themselves with the contents of this book if they wish to be forearmed against critics who say that eugenic measures are premature when environmental conditions for large elements of the population are still so adverse.

C. P. BLACKER.

Relief of the Poor on Merseyside. Social Science Department (Statistics Division) of the University of Liverpool. Liverpool, 1936. Liverpool University Press. Pp. 24. Price Is.

This is a valuable addition to the series of reports for which we are indebted to Mr. D. Caradog Jones and his collaborators. It continues the story of public assistance that is told in the *Social Survey of Merseyside* (Volume III, Chapter IV). Although described as "a dispassionate attempt to

examine the responsibility—whether already accepted or still disputed—of the Central and Local Authorities for the relief of the unemployed poor," the interest of the report for the general reader lies in the light it throws on the extent of poverty and on the measures taken to relieve it rather than on the question of who does or should pay for the relief.

From any aspect it is a gloomy record. In view of the recent general improvement in trade, it is startling to find that though this is reflected in Merseyside by a substantial fall in the number of persons dependent on unemployment statutory benefit or Unemployment Assistance Board allowance, this fall has been accompanied by a steady and formidable rise in the numbers dependent on public assistance under the Poor Law, of which the major part is directly or indirectly connected with unemployment. Of numerous figures given to illustrate this, the following may be selected as typical. In June 1932, when the slump was near its peak, the total of insured unemployed on Merseyside was 108,000. In June 1935 it had fallen to 97,000. During the same period the number of persons in receipt of public assistance rose from 75,000 to 100,110. In Liverpool alone the proportion of the population dependent wholly or partly on out-relief rose between December 1932 and December 1935 from 8.29 to 10.92 per cent., the earlier figure being about double the average for all county boroughs in England and Wales and the later figure showing a much steeper rise. The rise in cost was much greater, from £21,758 weekly at the earlier period to £38,318 at the later; an increase of 75 per cent.

The greater part of the report is devoted to an elaborate analysis of the composition and causes of this vast increase in out-relief. The result shows that the increase has affected more or less every section of the "outdoor poor," but that the factor of unemployment enters in, even when not ostensibly the occasion for seeking relief. For example, elderly parents previously helped by allowances from married sons or daughters have been forced on to the rates

by their children's unemployment, and the reluctance to seek relief once broken down, have preferred to continue it when the sons or daughters again get work. A more ominous symptom is the increase in sickness due partly to continual malnutrition and anxiety about work. Thus during the four years beginning March 31st, 1931, the number of cases which received medical aid from the Liverpool Public Assistance authority, at home or at the surgery, increased nearly fourfold—from 100,418 to 383,938 cases. Other figures indicate that persons over sixty-five contributed substantially to the increase.

But the most serious factor relating to sickness is the great number of persons within the unemployment insurance scheme who have been pushed on to the rates because they have been pronounced unfit for work, and have had recourse to outrelief to supplement the meagre scale of health insurance. The remedy suggested by the report is to permit the Unemployment Assistance Board to make up the difference between sick pay and unemployment pay. Perhaps a better remedy would be to amend the health insurance system by improving the scale and introducing dependants' allowances, as recommended some years ago by the Royal Commission on Health Insurance. Or, alternatively, provision for dependants of the unemployed as well as of the sick might be taken out of the scope of insurance and made a national charge. This would simultaneously remove a troublesome complicating factor in unemployment insurance, relieve the burden of the rates in depressed areas, and alleviate the lot of those ill-used sections of the community who, because of the nature of their occupations, are outside one or both systems of national insurance which as tax-payers they help to pay for. The lack of organized resistance to this anomaly is perhaps due to the heterogeneous character of these sections, including as they do black-coated workers above the insurance limit, domestic servants, and all workers who are self-employed or paid by the job. Pending however treatment of this larger problem, it is indefensible, as the report

remarks, that an unemployed man who falls sick should be expected to maintain himself and his family on about half the benefit he enjoyed when still available for work. Rather than go on the lower scale and supplement it by out-relief, such a man is tempted to ignore his malady and aggravate it by a continued search or pretended search for work.

Except on this one point, the report refrains from criticism of the existing system or of its administration. Since its publication, fresh light has been thrown on its subject by a report of the district auditor of the Ministry of Health, severely criticizing the administration of public assistance in Liverpool and suggesting laxity and extravagance. The Local Authority has responded by introducing drastic changes in administrative method and in scale. It is to be hoped that Mr. Caradog Jones will in a future report analyse the result of these changes.

ELEANOR F. RATHBONE.

## CRIMINOLOGY

East, Norwood, M.D., F.R.C.P. Medical Aspects of Crime. London, 1936. J. & A. Churchill Ltd. Pp. 437. Price 15s.

In a foreword, Sir John Simon writes: "I most heartily commend this book to the attention of all who give serious thought to the problem of the causes and the cure of crime." This sentence will be endorsed by all who read this book. Dr. East has had thirty-six years' experience of his subject, and is now generally regarded as our foremost authority on the medical aspects of crime. For the last twenty-five years he has been in much demand as lecturer and speaker, and no one who has heard his addresses can have failed to be impressed by his erudition and his balance of judgment.

This volume is a collection of papers which have been read before various scientific and specialist lay audiences interested in criminology. The eighteen chapters cover such widely separated topics as the medical aspects of prison administration, psychological medicine and criminal law, medical problems connected with the prosecution of offenders, medical aspects of prison labour, and murder from the point of view of the psychiatrist. Some of the chapters have but little bearing upon eugenics. In others, however, members of the Society will find discussed many subjects which touch them closely. To what extent, we may ask ourselves, are such manifestations as suicide, adult crime, alcohol or drug addiction, exhibitionism and murder the expression of inborn characteristics which appear in certain families or strains? To what extent are they preventable by genetic as well as social measures? Upon such problems Dr. East has many illuminating things to say.

In a valuable chapter summarising the observations made upon a thousand cases of attempted suicide, a distinction is made between the features exhibited by people who attempt to kill themselves and by those who succeed in killing themselves. We learn that, allowing for defects in the available information, the family histories of the former group show that in 27.1 per cent. of cases there was parental intemperance; in 0.6 per cent. parental epilepsy; and in 10.2 per cent. parental insanity. important connection between alcoholic intoxication and attempted suicide is effectively stressed. An analogous connection is discovered between exhibitionism and inebriety. Cases of indecent exposure were more frequently met with in 1913 when liquor was cheap, than ten years later. Of a series of 150 cases, two-thirds were classed as psychopathic (in that they suffer from undeveloped psychoses, psycho-neuroses, mental defect, etc.), and the remaining third as "depraved," the act being preliminary to an attempt at carnal knowledge, or part of an attempt to debauch children, or a gesture designed to attract, excite or invite a female.

The relation of adolescent criminals, drug addicts and alcohol addicts to the social problem group are discussed in other chapters. The adolescent criminal, who is described in a series of vivid pen pictures, is